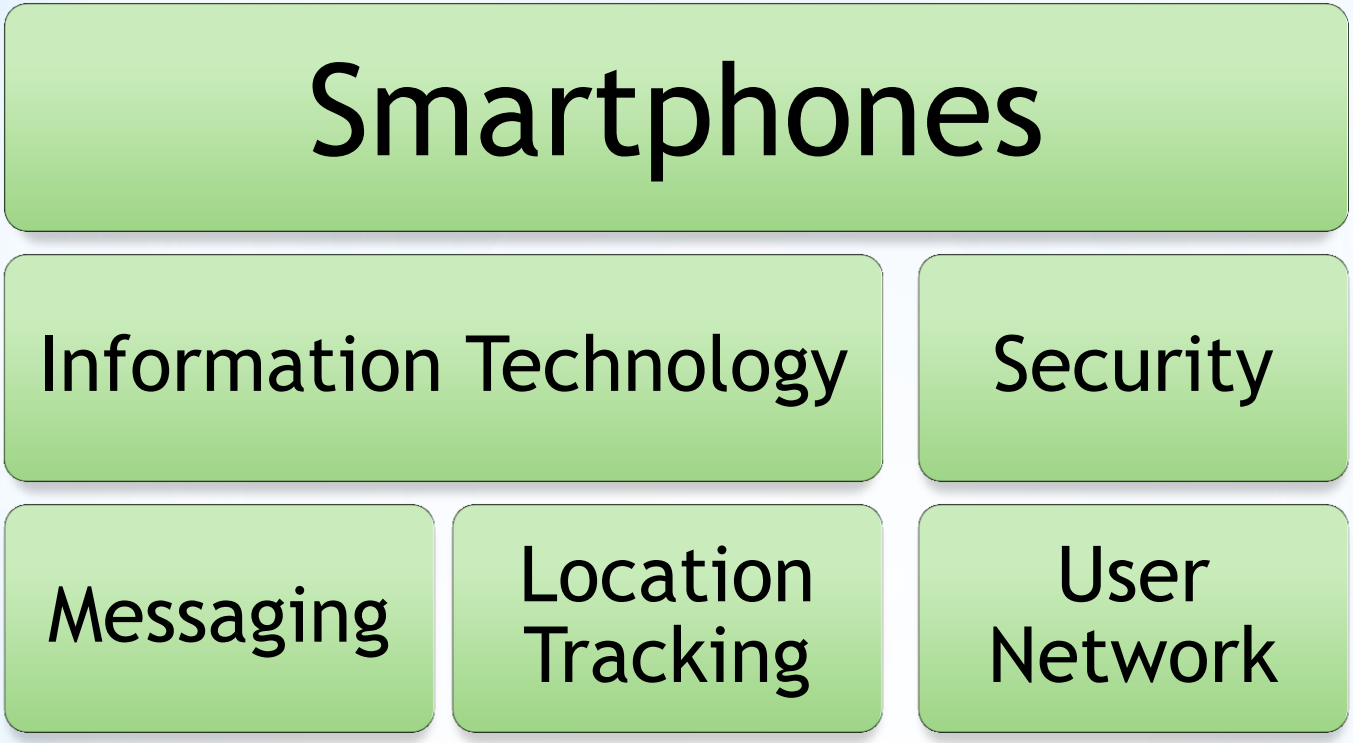
SafeMessenger

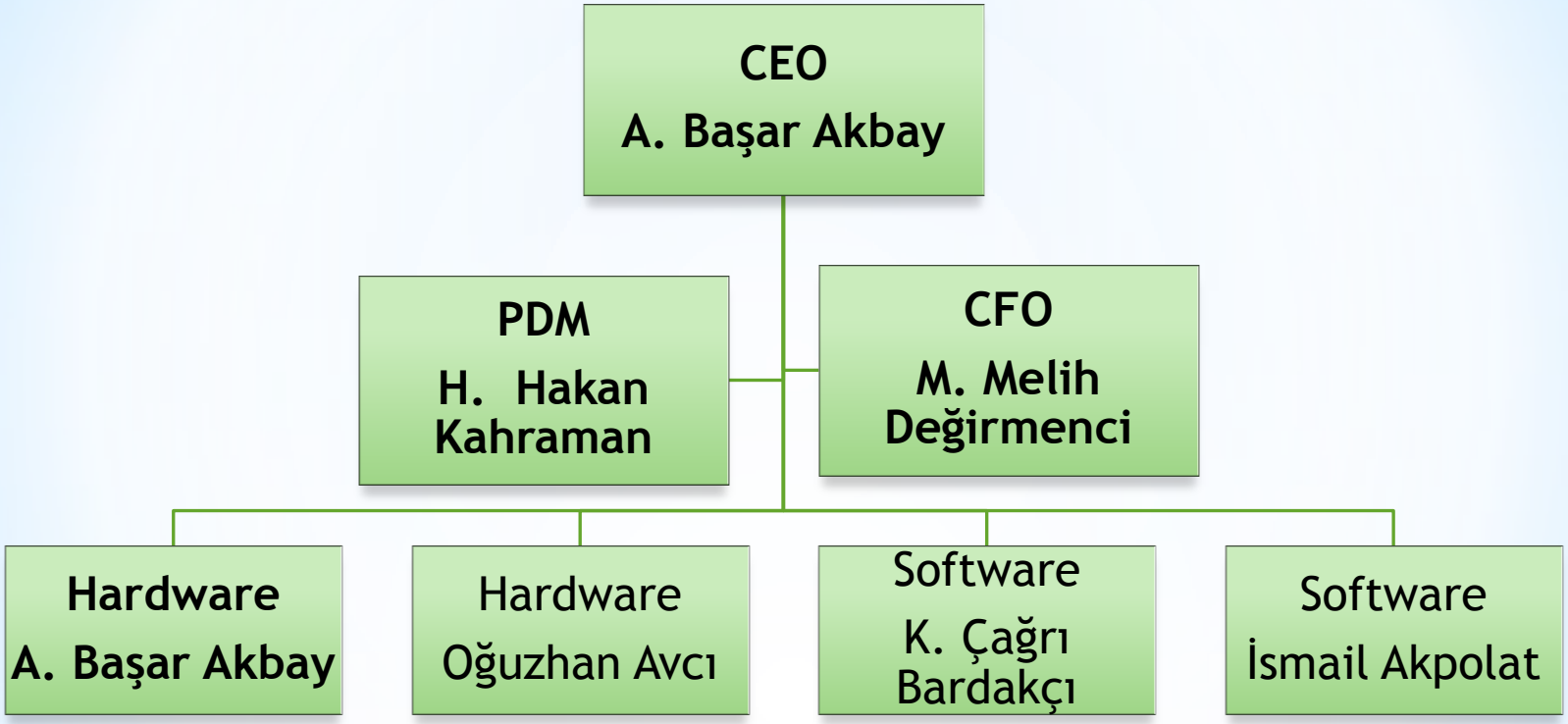
Secure Communications Center (SCC)

Secure Messaging and Location Tracking

SafeMessenger



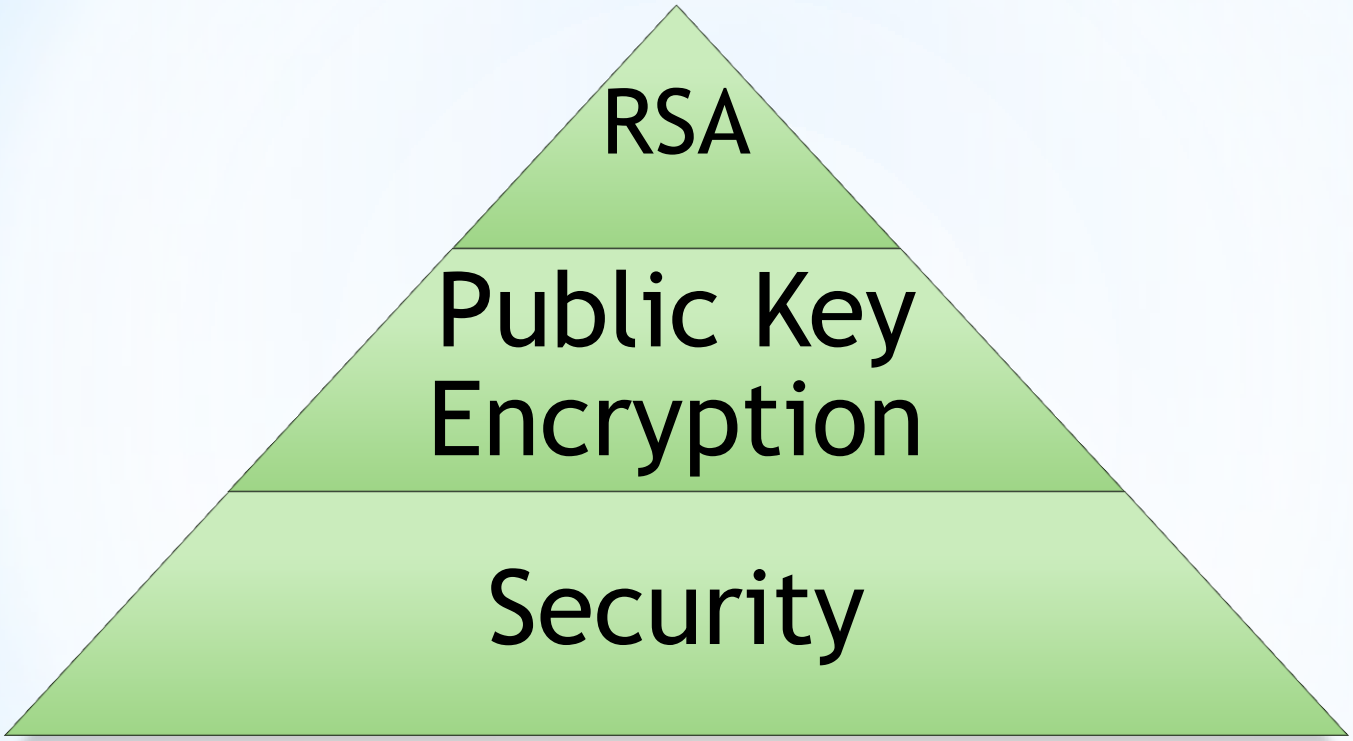
*SafeMessenger



*Secure Communications Center

*Outline

- Main Features
- Product Specifications
- Competitiveness - Marketing
- Future Development Plans



*Main Features

*Main Features

- Display of the User Locations on Google Maps
- User Interface for Messaging
- Storage of the Recent Information

PRODUCT SPECIFICATIONS

Hardware

- [ ] Functionality
- [ ] Components
- [ ] Requirements
- [ ] Power Specifications

Software

- [ ] Requirements
- [ ] User Interface
- [ ] Network - Database

Hardware Functionality:

* Our hardware renders its users to communicate safely by encrypting/decrypting the message and the location information. When the user desires to send information, hardware component receives the plain text from the phone, encrypts it and transmits the cipher text to phone.
* The communication between encryption device and the smart phone is carried out via Bluetooth.

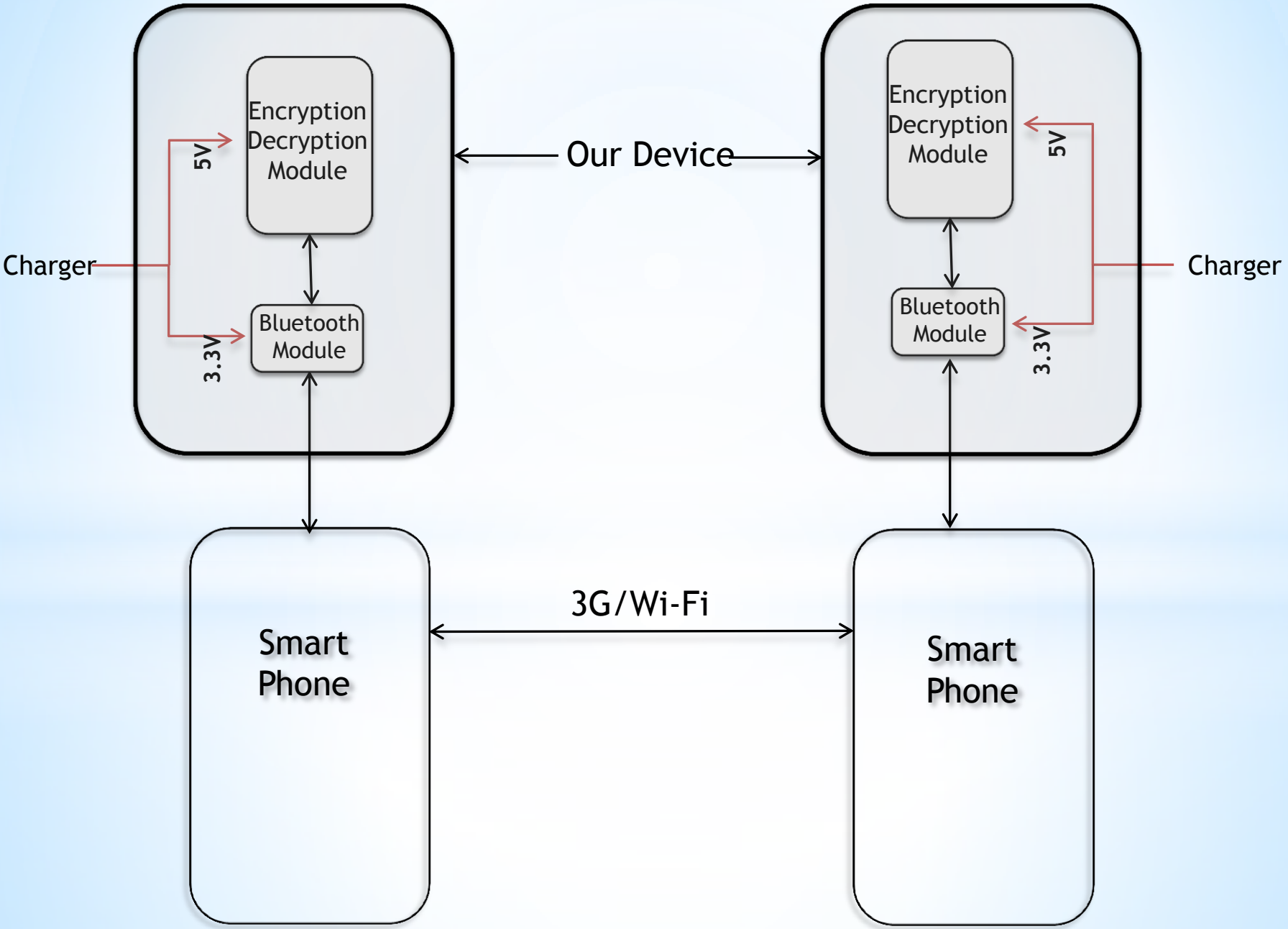


Fig 4:Hardware Block Diagram

Technical Specifications: Hardware

* Hardware Components:

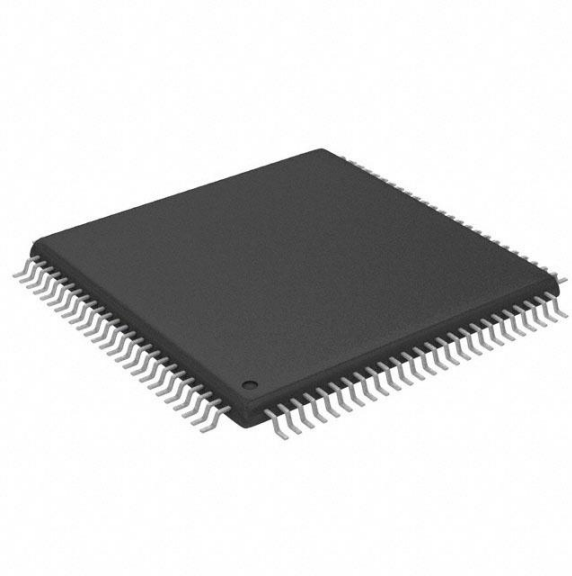


Fig 1:Altera EP1C3T100C8N FPGA Chip

Fig 2: Texas Ins. CC2540 Bluetooth Chip

Fig 3: Texas Ins. CC2540 Mini Bluetooth Development Kit

Hardware Requirements

* We aim to keep the hardware size less than equal to 60mm x 80mm x20mm for easier transportability.
* The weight of the product must be less than 100g
* Bluetooth range must be within 20-25 meters
* Supply voltage for charging must be between 5V
* Battery life must let at least 4.5 hours of continuous use and standby time must be over 80 hours

Power Specifications

* The device power supply requirements include voltage outputs 1.5V to 3.3V and current outputs from tens of milliamps to multiple amperes

* The logic device is sensitive to the voltage and current variations. Due to these reasons usage of supply voltage regulator is required. The regulator should be capable of satisfying power supply requirements given above

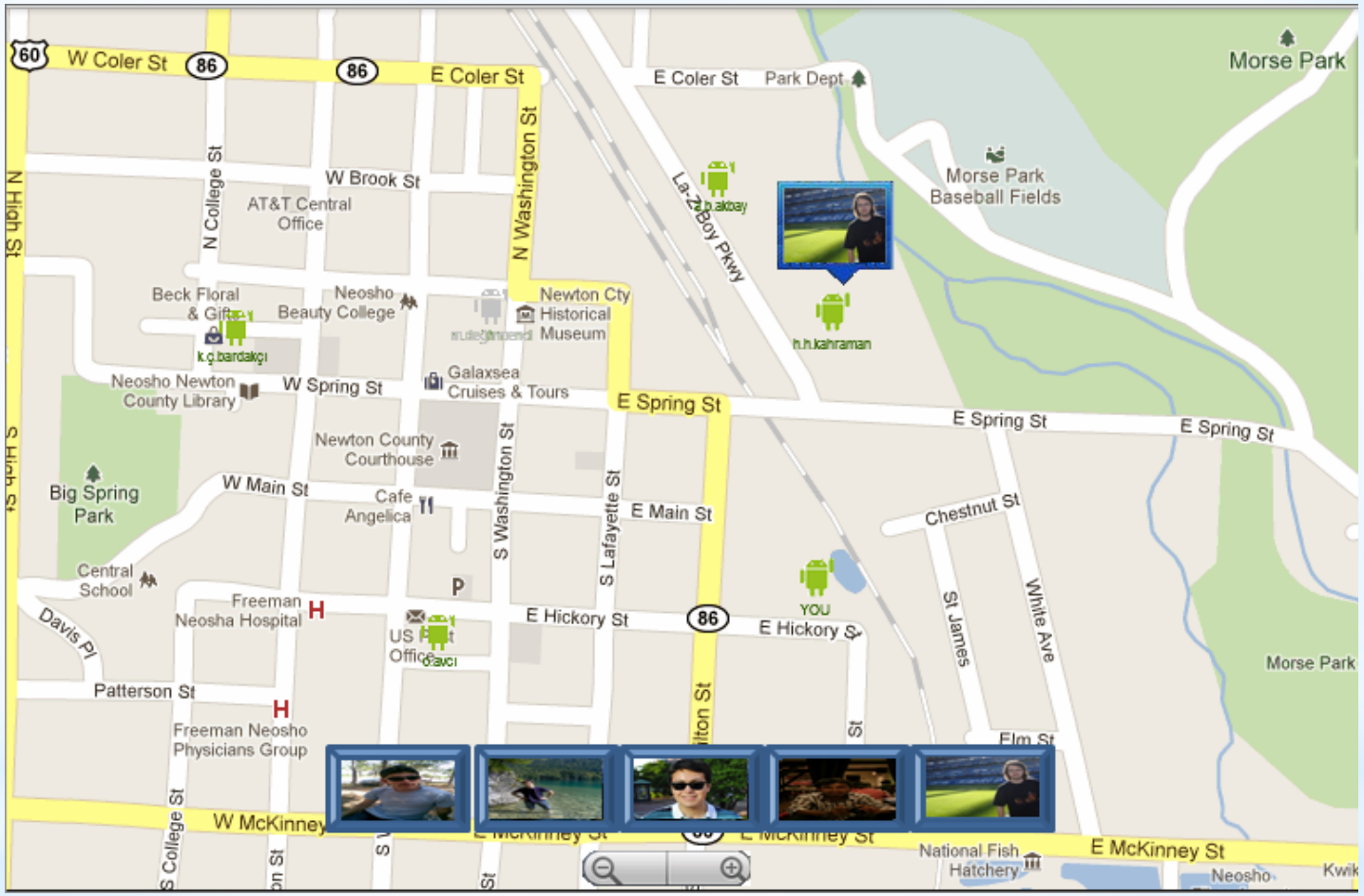
Power Specifications

* As the power supply voltage, usage of rechargeable batteries which can provide high current outputs above 500mA and nominal voltage output around 5V are required

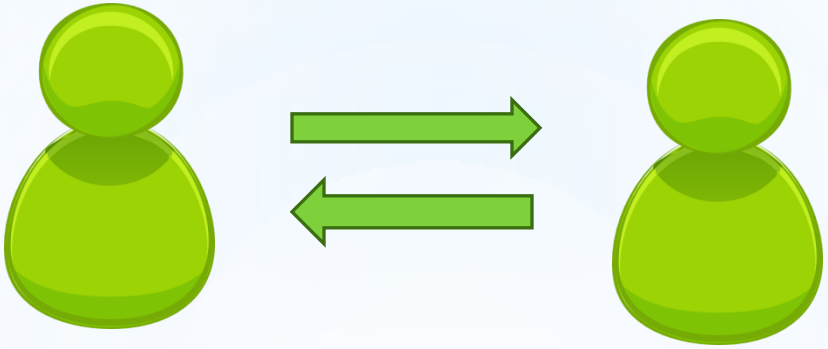
* The supply voltage shall have high energy density of around 1800 – 5000 mAh and low weight which is around 30 – 50g. This satisfies at least 4 hours of continuous usage of the encryption device

SOFTWARE SPECIFICATIONS

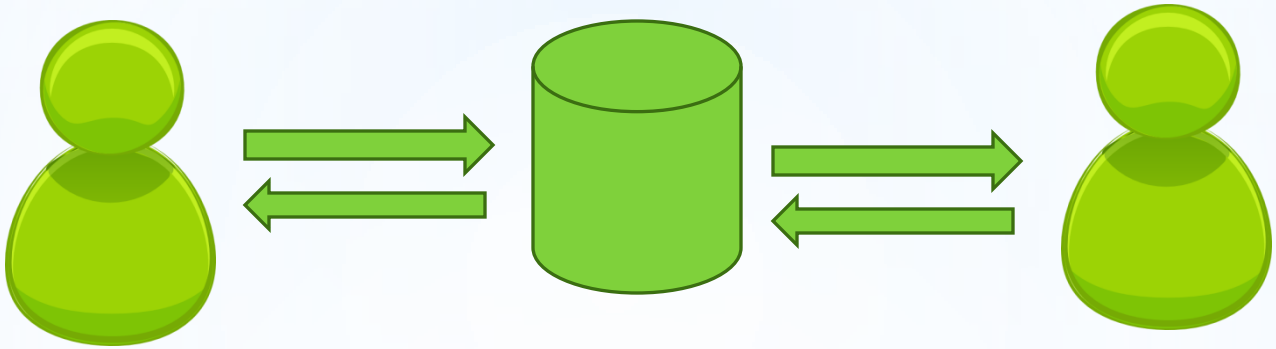
* Username-password authentication and authorization
* Get the location using GPS
* Send the location using SSL network
* Evaluate coming location information
* Scaling options (starting from 10 meters)
* Users' photo, longitude and latitude information -by assuming the user's position as zero point- can be seen when their location is clicked


W Coler St
E Coler St
Park Dept
Morse Park
Morse Park Baseball Fields
W Brook St
AT&T Central Office
N College St
N Washington St
N High St
La-Z-Boy Pkwy
Beck Floral & Gift
Neosho Beauty College
Newton Cty Historical Museum
k.ç.bardakçı
h.h.kahraman
Neosho Newton County Library
W Spring St
Galaxsea Cruises & Tours
E Spring St
Newton County Courthouse
Big Spring Park
W Main St
Cafe Angelica
E Main St
Chestnut St
Central School
Freeman Neosha Hospital
E Hickory St
YOU
Davis Pl
Patterson St
Freeman Neosho Physicians Group
S College St
W McKinney St
E McKinney St
National Fish Hatchery
Neosho
Kwik
St James
White Ave
Elm St

* Creating new groups
* Send invitations for their groups
* Send request to join a group
* Messaging and location sharing with separate groups
* Online-offline
* Bluetooth ✖ Encrypt on phone
* Privacy and Location hiding



* Public and private key
* Messaging between users directly
* 300 characters



* Locations sent to DB first
* Last 10 locations kept in DB

Competitiveness & Marketing

* COSTS

* PRICES

* COMPETITION ANALYSIS OF THE MARKET

TARGET MARKET : SMART PHONES ACCESSORIES

CUSTOMER PROFILE :

* GOVERNMENT
* CORPORATIONS WHICH CARE SECURITY

DISTRIBUTION CHANNEL :

* VIA E-COMMERCE (HARDWARE)
* VIA ANDROID MARKET (SOFTWARE)

COMPETITORS :

* SOFTWARE

    * SOS LOCALIZATION – 1.99 $
    * GPSMS - Free
    * BUDDY BEACON – 2.49 $

- ONLY LOCATION TRACK
- NO ENCRYPTION
- NO MESSAGING
- CHEAP BUT NOT SECURE

* HARDWARE

* ENCRYPTION PORTABLE TELEPHONE RECORDER (GUANGZHOU ELECTRONIC) – 148.99 $

* ENCRYPTED RECORD OF CONVERSATIONS AND MESSAGES

* PAIR OF SIGILLU SECURE ENCRYPTED PHONE:

NOKIA E61 VERSION (SIGILLU) – 3600 $

* ENCRYPTED SMS AND CONVERSATION

* TOO EXPENSIVE

Pair of Sigillu Secure Encrypted Phones: Nokia E61 version

by Sigillu

Be the first to review this item | Like (0)

Available from these sellers.

1 new from $3,600.00

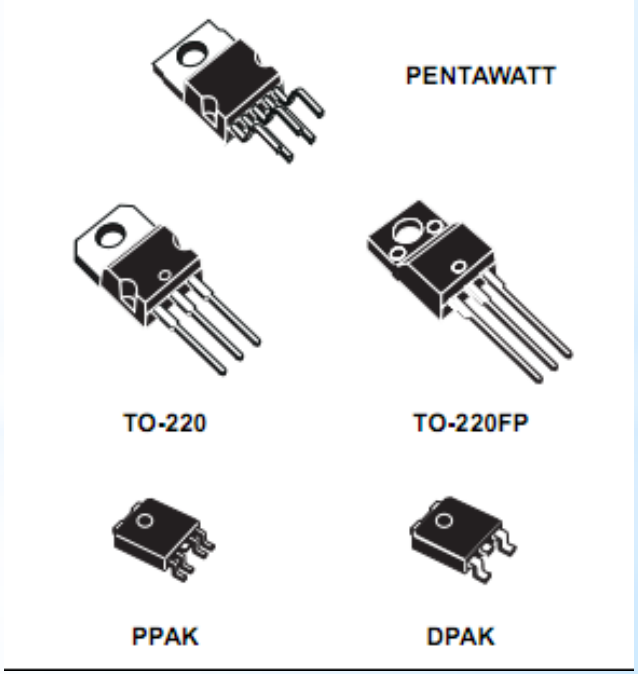
* INSTAMAPPER GPS TRACKING – 40 $
    * FOR CARS
    * ADDITIONAL COST – 5 $ - 0.35 $
    * ADDITIONAL FUNCTIONS – CALL & SMS (0.10 $)
    * NO ENCRYPTION

* HARDWARE COST

* POWER COST

BATTERY – 5 $

REGULATOR – 1 $



* FPGA COST

    ALTERA FPGA CHIP – 10.70 $

* BLUETOOTH COST

    TEXAS INS. BLUETOOTH CHIP – 2.39 $

* ADDITIONAL COSTS
    * RLC COMPOENETS
    * BOX MATERIALS
    * BATTERY CHARGER

TOTAL COST OF THE PRODUCT :

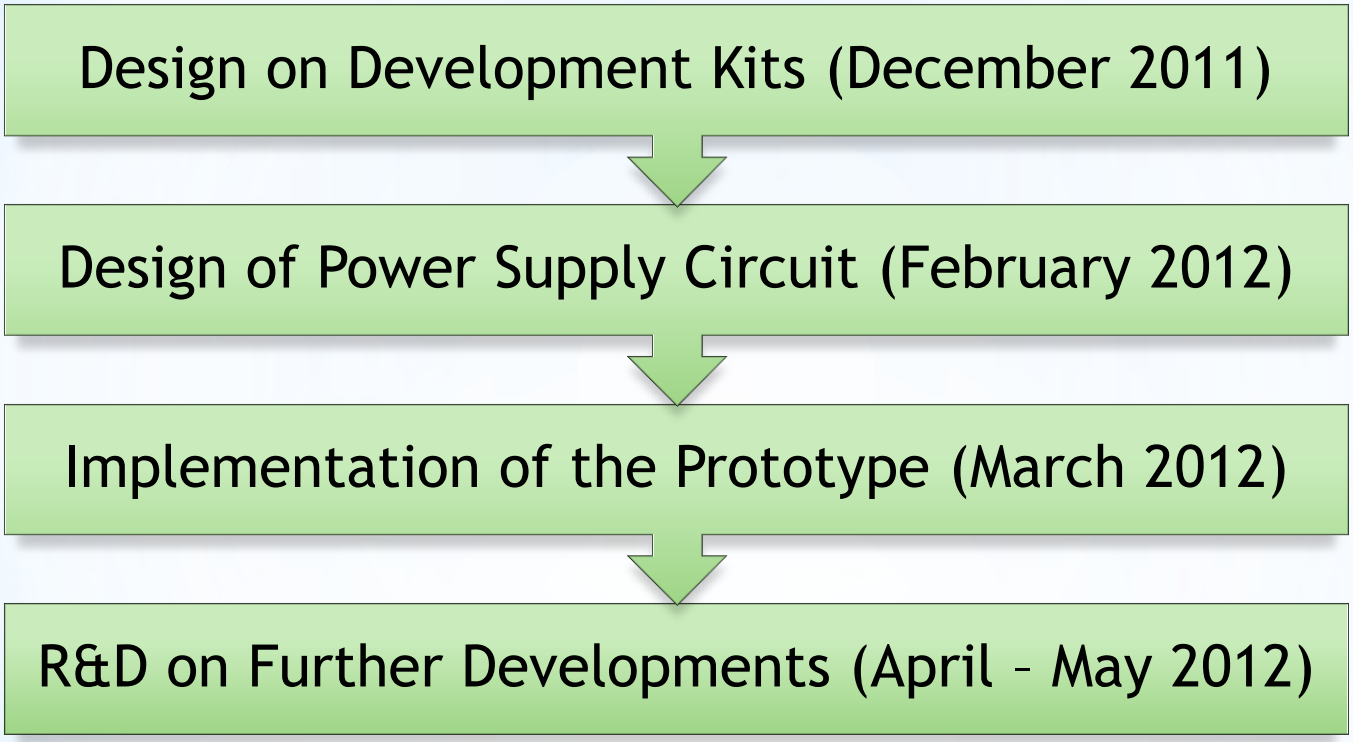
20.09 $ + ADDITIONAL COSTS

PRICE OF THE PRODUCT :

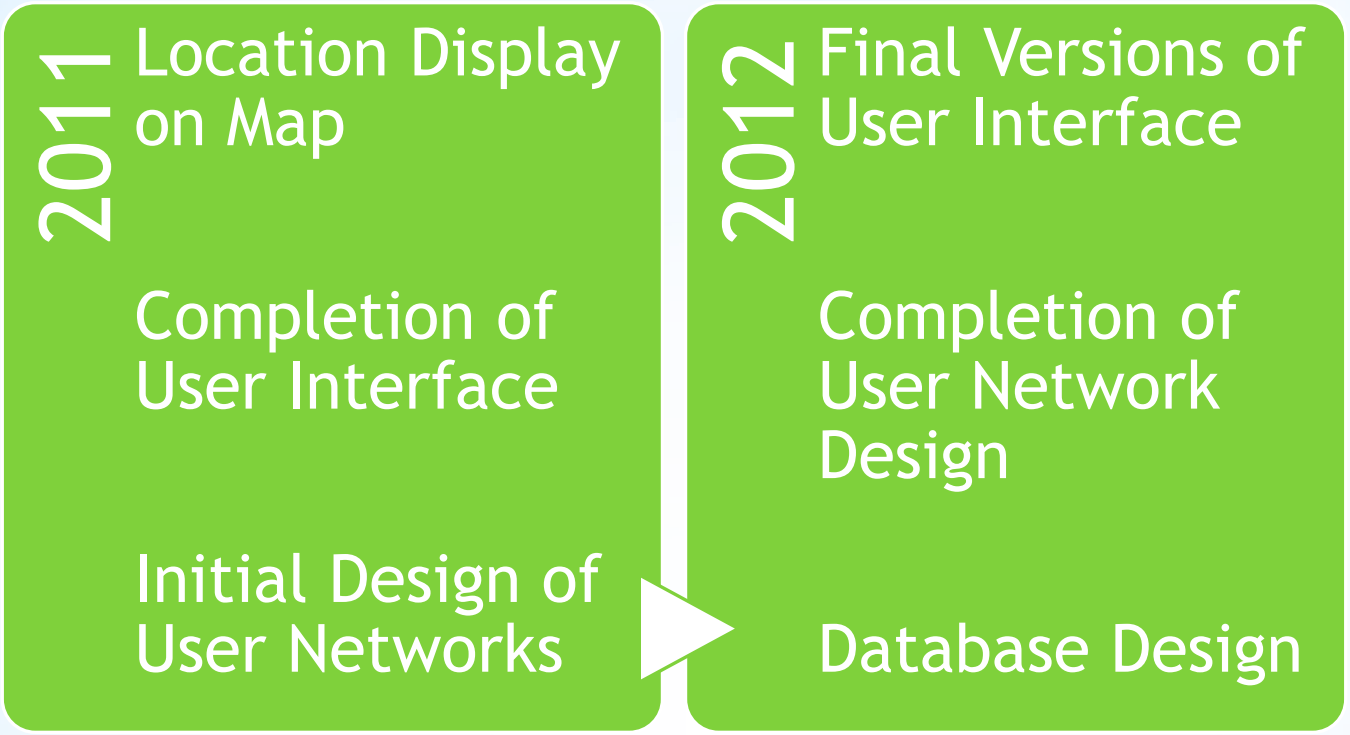
* only SOFTWARE : ~10 $
* SOFTWARE + HARDWARE : ~100 $

Future Development Plans

* Timeline
* Extensions



*Hardware Development Plan



*Software Development Plan

Further Developments

- Sending and Receiving image and voice data.
- Adding an external GPS Chip.
- Developing of a Database.
- Developing a digital communication radio.

THANK YOU FOR LISTENING

QUESTIONS ?